

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A storage medium storing plural image data elements that together are used to display ~~represent an a visually perceptive image~~, said storage medium storing said image data elements comprised of plural instances of a stored data element format, all said instances having the same predetermined bit count, each instance representing a portion of said image, each said stored data element instance comprising:

a flag indicating whether said instance provides a multi-bit alpha component field storing multi-bit semi-transparency information that may or may not be present in said instance of said format; and

a color component portion setting forth at least one color component, said color component portion having a first length if said flag indicates said instance provides said multi-bit alpha component field and having a second length greater than said first length if said flag indicates said instance does not provide said multi-bit alpha component field, wherein the color component portion uses the bit count otherwise available for the multi-bit alpha component field to provide increased color resolution of said instance of said stored data element format when the multi-bit alpha component field is not present, different ones of said stored plural image data elements for said image providing different color resolution precisions.

2-4 (cancelled)

5. (currently amended) A computer graphics system including:
a storage device storing an image comprising plural data elements corresponding to color image elements, said data elements each setting forth RGB color information and an indicator field indicating whether or not said data element provides a further, multi-bit field encoding semi-transparency, said elements all having the same predetermined length irrespective of whether or not they provide said further, multi-bit field encoding semi-transparency, only some but not all of said plural data elements for said image allocating bit positions for semi-transparency, others of said elements for said image using said bit positions to provide increased color resolution; and

a display that displays a visually perceptible image of said color image elements.

6. (Original) A system as in claim 5 wherein said indicator field comprises a single bit flag.

7. (Original) A system as in claim 5 wherein ones of said plural data elements that do not encode semi-transparency use the space otherwise occupied by said multi-bit field to encode said color information at higher resolution.

8. (previously amended) A system as in claim 5 wherein said RGB color information encodes each of the three primary colors red, green and blue with the same precision.

9. (Original) A system as in claim 5 wherein each said data element has a 16-bit length, and said indicator field comprises a single bit.

10. (Original) A system as in claim 5 wherein said multi-bit field consists of three bits.

11. (Original) A system as in claim 5 further including a data converter coupled to said storage device, said data converter converting between said multi-bit semi-transparency encoding and higher resolution alpha information.

12. (Original) A system as in claim 11 wherein said data converter quantizes or dequantizes said higher resolution alpha information in equal steps.

13. (Original) A system as in claim 11 wherein said data converter quantizes or dequantizes said higher resolution alpha information in eight equal steps.

14. (currently amended) A color image element encoding format for use in generating a visually perceptible color image display, said format comprising:

an indicator indicating whether an instance of said format is capable of encoding semi-transparency; and

at least one variable sized field setting forth RGB color information concerning said color image element, said at least one variable sized field having a first length if said indicator indicates said format instance is incapable of encoding semi-transparency, said at least one variable sized field having a second length less than said first length if said indicator indicates said format instance is capable of encoding semi-transparency,

wherein said format has a predetermined fixed length and the RGB color information field uses bit resolution otherwise available for encoding semi-transparency when said indicator indicates the instance does not encode semi-transparency, different

instances of said format encoding the same image using particular bits for different purposes, some of said instances using said particular bits to encode semi-transparency encoding, others of said instances using said particular bits to provide increased color resolution.

15 (cancelled)

16. (previously presented) A color image element encoding format as in claim 14 wherein said format includes a multi-bit alpha field if said indicator indicates said format instance is capable of encoding semi-transparency.

17. (Original) A color image element as in claim 14 wherein said color image element encoding format encodes texels.

18. (currently amended) A method of representing an image with multiple data elements, said method, comprising for each said element:

(a) specifying whether said image element will encode semi-transparency;

(b) if said specifying step specifies that said image element will encode semi-transparency, allocating a set of plural bits within an RGB encoding format to encode alpha and using at least some remaining bits in said format to set forth RGB color information at a first precision; ~~and~~

(c) if said specifying step specifies that said image element will not encode semi-transparency, allocating said set of plural bits to set forth RGB color information so the element provides color information at a second precision greater than said first precision, and

(d) generating a visually perceptible color display based at least in part on said image elements,

wherein the image element overall bit length of said element is the same whether or not it encodes semi-transparency.

19. (Original) A method as in claim 18 wherein said image element comprises a texel.

20. (Original) A method as in claim 18 wherein said step (c) comprises encoding color of said image element at higher resolution through use of said set of plural bits.

21. (currently amended) ~~A~~ A display system including an alpha component converter that converts between first and second resolutions of semi-transparency information, said converter quantizing or dequantizing first resolution semi-transparency information into a predetermined number of equal sized steps to form second resolution semi-transparency information, said display system further including a display that generates a visually perceptible display based at least in part on said second resolution semi-transparency information.

22. (Original) The alpha component converter of claim 21 wherein the number of equal sized steps is eight.

23 (cancelled)

24. (currently amended) A graphics generator including:
a texture memory storing at least one texture,

a texture processing unit coupled to said texture memory, said texture processing unit mapping said stored texture, ~~and~~

a rasterizer that rasterizes said mapped texture to provide image information, and
a display that generates a visually perceptible display of said image information,

said texture memory storing said texture in the form of multiple stored texel data elements, some of said texel data elements providing a first color resolution and including multiple bits allocated for encoding semi-transparency, others of said texel data elements not encoding semi-transparency but instead reallocating said multiple bits so the texel data element provides a second color resolution higher than said first color resolution.